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ABSTRACT

Profile analyses of social behavior exhibited shortly after entry were conducted to determine whether youths who successfully completed a program at a wilderness camp exhibited patterns of behavior which were different than those from youths who did not complete the program. Successful youths were found to have significantly greater scatter in their profiles and greater elevations on one of the behavior checklist categories used by counselors. A discriminant function analysis indicated that 78% of the youths could be correctly identified as successes or failures when a combination of profile level, scatter and the relative elevations (shape) of four behavior categories were used as predictors. Self-ratings of behavior were not found to have the utility for predictive purposes that counselor ratings did. (Author)

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Predicting Treatment Outcome Through Profile Analysis of the Jesness Behavior Checklist

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Predicting Treatment Outcome Through Profile Analysis of the Jesness Behavior Checklist

Despite the best of intentions and the most carefully planned programs, many treatment facilities for disturbing youth find that a significant portion of their residents fail to meet basic treatment goals. These youths may "run away" or present aggressive and disruptive behavior that the staff members find very difficult to control. Some youths show no improvement over time and the program staff members simply "give up" and discharge them. The scope of this problem is apparently quite large. Indeed, evaluation studies by Jones (1978) indicate that program failures average approximately 50% of all youths enrolled in treatment facilities. Certainly it would be useful if these youths could be identified before a program invests much time and energy using an ineffective treatment approach. If these high-risk individuals could be identified shortly after program entry, facility staff members could decide either to devise a special program to suit the youths' needs or to refer the youths to another facility where their needs could be met.

While Trout, Fremouw and Kalfus (1979) have investigated the utility of demographic and related background variables for predicting program success, this paper will examine whether the pattern of social and interpersonal behavior youth exhibit at entry can be used for predictive purposes.

Method

Subjects and Setting

Subjects for the study were 53 residents at Pressley Ridge Wilderness Camp during the years 1977-1979. Pressley Ridge Camp is a treatment

facility for male juveniles modeled after the wilderness camp programs described by Loughmiller (1965). The Camp and its programs are described elsewhere (Fremouw, Byers, Brunts and Hawkins, 1977).

Predictive Instruments

Within two weeks after a youth's admission, two counselors made ratings of the youth's social behavior using the Jesness Behavior Checklist (Jesness, 1970). In addition, the youth completed a self-rating version of the Checklist. The Jesness Checklist contains 80 behaviors which are grouped into 14 categories: Unobtrusiveness, friendliness, responsibility, considerateness, independence, rapport, enthusiasm, sociability, conformity, calmness, communication, insight, social control, and anger control. Additional information, including psychometric data, are available in the Manual (Jesness, 1970).

Discharge Criterion

Immediately following discharge, 3 staff members classified each youth as a "success" or "failure" using the following definitions:

1. Success - successfully completed general and individual treatment goals and went to a less restrictive environment.
2. Failure - failed to meet most of the treatment goals and discharged either by mutual consent or against program advice.

Perfect agreement between all three raters was obtained for 76% of the cases.

Data Analysis

The basic strategy for analyzing the data was profile analysis (Chronbach and Gleser, 1953). This approach permits the description of

the pattern of behavior of an individual or group as well as differences in behavior patterns between individuals or groups. Pattern analysis involves the examination of three aspects of a set of scores: a) Level, defined as the mean of the scores, b) scatter or dispersion, defined as the standard deviation of the scores about the mean multiplied by the square root of the number of scores, and c) shape, defined as the "ups and downs" in the scores which remain after the scores have been adjusted for level and scatter. The advantage of profile analysis is that it maximizes the use of the information available from a set of scores by taking account of the relationships between them.

Results

Counselor Ratings

Figure 1 shows the T-scores (based on the norms provided by Jesness, 1970) for the average counselor behavior ratings over all fourteen categories for program success (N = 22) and failures (N = 31). High scores indicate a relatively high ratio of positive to negative social behavior. The mean profile levels were 49.6 (S.D. = 12.6) for the success and 47.4 (S.D. = 7.0) for the failures. Using Cattell's (1949) coefficient of pattern similarity, the two profiles were found to be significantly related, $r_p = .875$, $P < .01$.

Figure two represents the two mean group profiles after they have been adjusted for level by subtracting the profile mean from each category score for each subject. The resulting scores are called deviation scores. The mean profile scatter was 38.7 (S.D. = 11.2) for the successes and 30.6 (S.D. = 8.0) for the failures.

Figure three represents the mean residual scores for both groups after they have been adjusted for scatter by dividing each deviation score by the profile scatter for each subject.

One-way Analyses of Variance (ANOVA) were used to test for significant differences between the two groups in terms of profile mean, scatter and individual residual scores. As might be expected, the mean for the successful group was higher than the mean for the failures, but the differences did not reach the .05 level of significance. Scatter was significantly greater in the successful group than in the nonsuccessful group, $F = 8.33$, $P = .006$.[1] Of the 14 residual scores only responsibility exhibited a significant difference with successes showing higher elevations than failures, $F = 3.95$, $P = .05$. The major finding from the series of ANOVAs was that the behavior profiles of residents who successfully complete the program have more scatter than the profiles of those who do not.

A stepwise discriminant function predicting success or failure was generated in which profile mean, scatter and the residual scores were used as predictors. Profile mean was entered first, then scatter and finally the residual scores on the basis of whether the Mahalonobis distance, D^2, was maximized between the two groups. The resulting function, which contained four residual scores in addition to level and scatter, was significant, $F = 2.69$, $P = .03$.[2] When the function was used to classify the subjects, 78.3% were classified correctly. Using the point midway between the group centroids as the cutoff, 78.9% of the successes and 77.8% of the failures were classified correctly.

Self Ratings

The results of the analyses from the self ratings of behavior will not

be presented in detail here.[3] Essentially, we found that the profiles of the successes and failures did not differ significantly in terms of level, scatter or shape. In addition, a statistically significant discriminant function could not be generated.

Discussion

It is apparent that the patterns of behavior that successful and nonsuccessful youths exhibit at entry are more similar than different. The primary difference seems to be in terms of variability; successful youths tend to have more variability in their patterns of behavior than do nonsuccessful youths. The reason for this is unclear. Perhaps the greater differentiation in the behavioral ratings of the successful youths is a sign that counselors are paying closer attention to them than to nonsuccessful youths. This suggests that the counselors find the successful youths more likeable or attractive interpersonally. The hypothesis could be investigated by examining the relationship between scatter and counselor ratings of attractiveness and/or measures of time spent interacting with the youths; larger amounts of profile scatter should be related to high ratings of attractiveness and greater amounts of counselor-youth interaction.

Although the profiles of successful and nonsuccessful youths were similar in many respects, they were different enough in the present study to permit reasonably accurate classification. While the results of the discriminant function analysis need to be cross-validated, they indicate that entry patterns of behavior may be useful for differentiating between successful and nonsuccessful youths when counselor ratings of behavior are used. Self-ratings of behavior, on the other hand, do not seem to hold

much promise for prediction of success. Either youths are not good judges of their own behavior or they view their behavior somewhat differently than counselors do. In addition, social desirability factors might overrule any real differences in behavior that successful and nonsuccessful youths might present.

A final note should be made about the dangers of labeling. Although we feel the prediction of success has practical utility in youth treatment, we feel this utility is in suggesting alternate programming for youths who would otherwise fail. We are strongly opposed to the use of predictive schemes if they merely result in some youths being labelled as failures and "written off" as a waste of program resources and time. For these reasons, any such predictive scheme should be used with caution. It is our hope that the results of this study will further the development of new treatment approaches rather than the exclusion of some youths from whatever treatment is available.

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Footnotes

[1]All significance figures reported are for two-tailed tests.

[2]Wilks Lamda = .70; Mahalonobis D^2 = 1.69

[3]A more detailed report on the analyses of the self-ratings is available from the first author.

Figure 1

Mean Counselor Ratings of Behavior Two Weeks After Entry

T-Score Profiles for Successful and Unsuccessful Residents

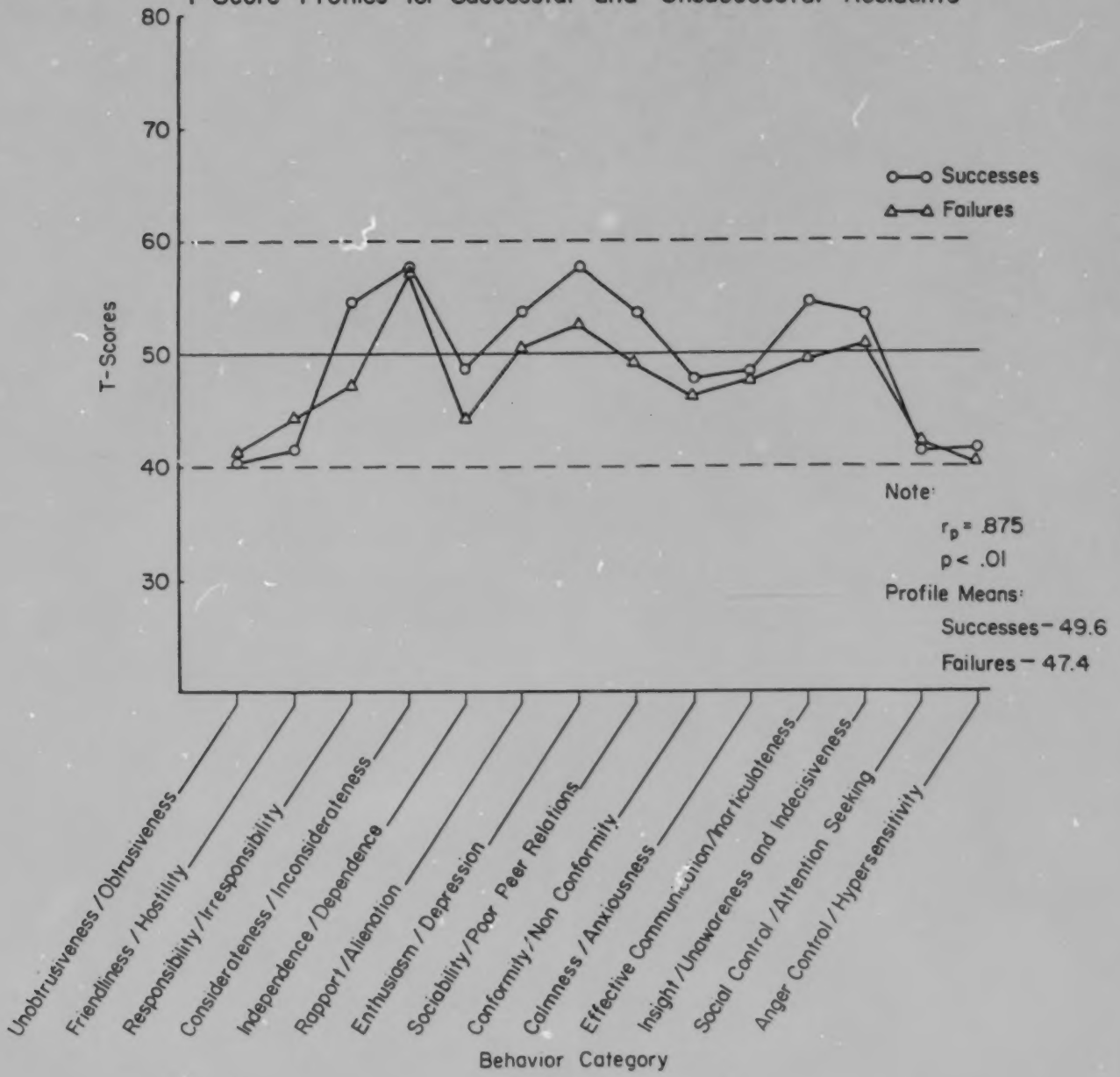

Figure 2

Mean Deviation Scores for Counselor Ratings of Behavior for Successful and Unsuccessful Residents

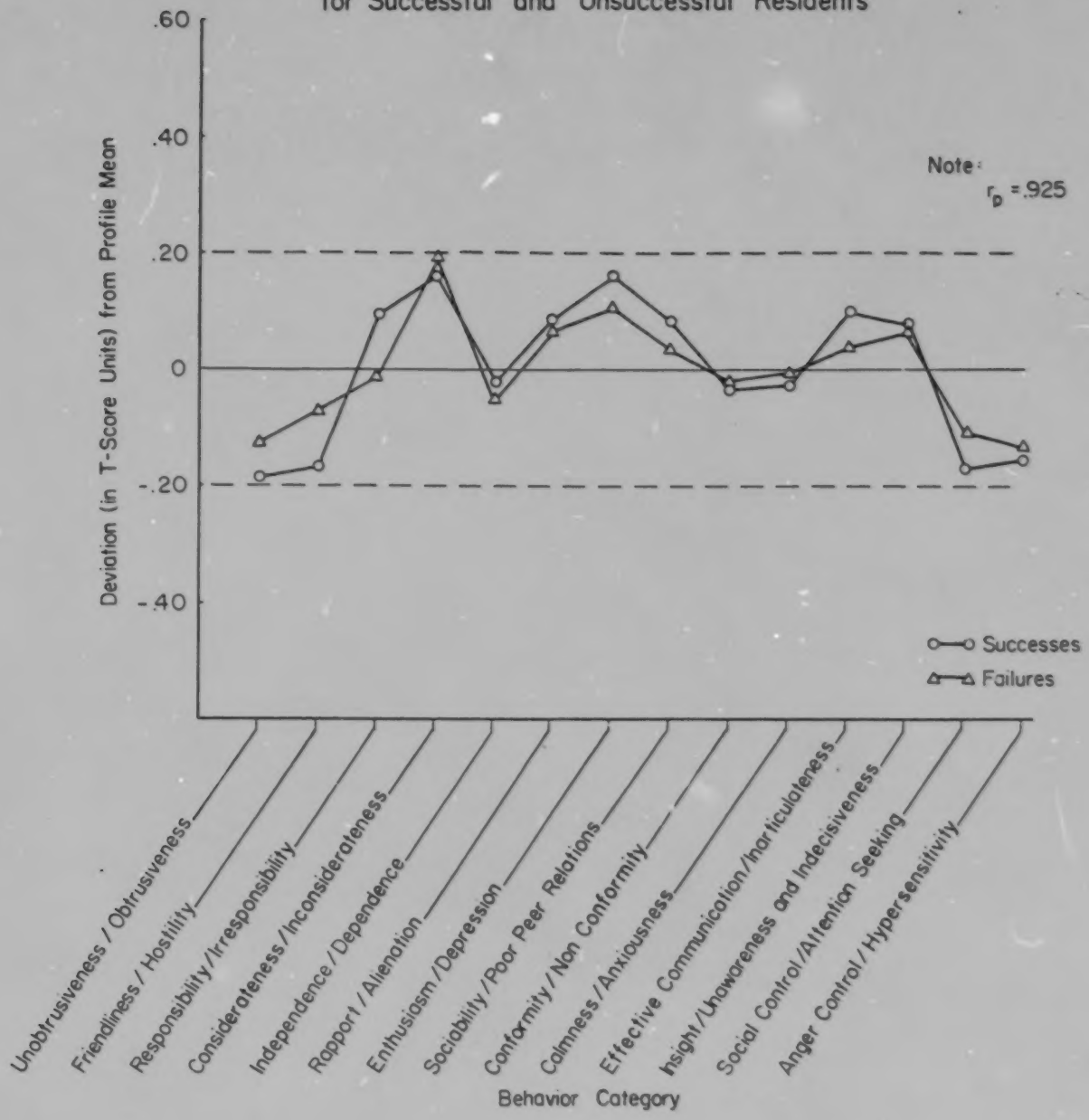

Figure 3

Mean Residual Scores (Deviation Scores Adjusted for Scatter) for Counselor Ratings of Behavior for Successful and Unsuccessful Residents